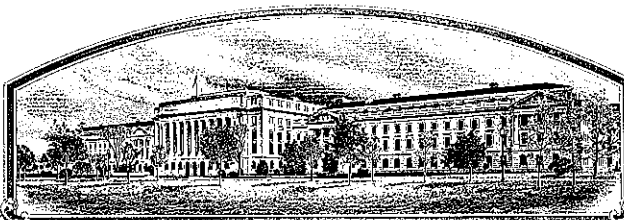


No.

9200213



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

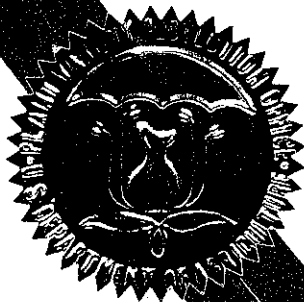
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'A3237'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirtieth day of April in the year of our Lord one thousand nine hundred and ninety-six.

Attest:

Marsha A. Hunter
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Samuel J. Feltman
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Asgrow Seed Company		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. XP3237	3. VARIETY NAME A3237
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) 9646-190-19 Gull Road, Building 190 Kalamazoo, MI. 49001		5. PHONE (include area code) 616-385-6649	FOR OFFICIAL USE ONLY PVPO NUMBER 9200213 Date June 17, 1992 Time 12:40 <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M. Filing and Examination Fee. \$2150.00 Date June 9, 1992 Certificate Fee \$300 Date 3-25-96
6. GENUS AND SPECIES NAME Glycine Max	7. FAMILY NAME (Botanical) Leguminosae		
8. CROP KIND NAME (Common Name) Soybean	9. DATE OF DETERMINATION September, 1987		
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware		12. DATE OF INCORPORATION March 22, 1968	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS			
Steve Hawkins Asgrow Seed Co. 9635-190-23 Gull Road, Bldg. 190 Kalamazoo, MI. 49001		Alan Walker Asgrow Seed Co. 5926 Hwy. 14 East Janesville, WI. 53546	

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

a. ☒ Exhibit A, Origin and Breeding History of the Variety

b. ☒ Exhibit B, Novelty Statement

c. ☒ Exhibit C, Objective Description of Variety

d. ☒ Exhibit D, Additional Description of Variety

e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership

f. ☒ Seed Sample (2,500 viable untreated seeds) Date Seed Sample mailed to Plant Variety Protection Office _____

g. ☒ Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States"

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act)

☐ YES (If "YES," answer items 16 and 17 below) ☒ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

☐ YES ☒ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?

☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?

☐ YES (If "YES," through ☐ Plant Variety Protection Act ☐ Patent Act Give date _____) ☒ NO

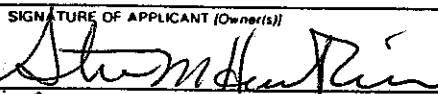
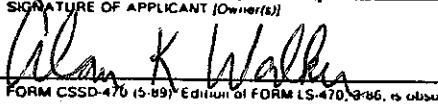
19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?

☐ YES (If "YES," give names of countries and dates) ☒ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s)) 	CAPACITY OR TITLE Director of Marketing	DATE 5/28/92
SIGNATURE OF APPLICANT (Owner(s)) 	CAPACITY OR TITLE Director of Soybean Research	DATE 5-21-92

Asgrow Seed Company
PVP application-Soybean, A3237
May 12, 1992

9200213

EXHIBIT A

ORIGIN AND BREEDING HISTORY OF A3237

1985 - Cross made in 1985.
Parentage: A3501/A3733

1985-86 - F1 and F2 generations grown at Isabela, Puerto Rico.
(winter)

1986 - F3 population grown at Ames, Iowa. Three-hundred plants selected from bulk population and threshed individually.

1987 - Progeny row D85-1658 J87-26962 selected for it's uniformity, standability and disease resistance. This row was harvested in bulk and seeds were checked and verified for uniform hilum color and seed coat luster.

It was September, 1987, that D85-1658 J87-26962 was determined to be a stable, unique line.

1988 - D85-1658 J87-26962 was entered in the Preliminary III Yield Test, P372, conducted at two locations, Stonington, IL. and Oxford, IN.
D85-1658 J87-26962 was tested for Phytophthora root rot resistance in January 1989 and found to be resistant to race 1.

1989 - D85-1658 J87-26962 was entered into the S305 Strain Yield Test grown at 8 locations including : Ames and Sperry, Iowa; Farmer City, Monmouth and Stonington, Illinois; Muncie and Oxford, Indiana; and New Hampshire, Ohio.

D85-1658 J87-26962 was selected for it's yield and standability and assigned the experimental designation X3237.

1990 - X3237 was entered in advanced yield tests which were grown at 20 locations across the midwest.

X3237 was tested for Phytophthora root rot resistance and found to be resistant to races 1-5, 7-11, 13, 17, 21.

continued...

Exhibit A continued...

Breeder Seed of X3237 grown at Stonington, IL. and Oxford, IN.

X3237 was selected for it's yield and stability and renamed XP3237.

1990-91 - Breeder Seed was increased in Puerto Rico.
(winter)

1991 - XP3237 was entered into advanced yield tests grown at 24 locations.

Foundation seed of XP3237 was produced near Stonington, IL.

XP 3237 was nominated for release and production and designated A3237.

A3237 is uniform and stable within commercially acceptable limits based on trial observations since its development in 1987. As with other soybean varieties, variants can occur for almost any trait during the course of repeated sexual reproduction.

Asgrow Seed Company
 PVP Application - Soybean, A3237
 May 12, 1992

EXHIBIT B

NOVELTY STATEMENT CONCERNING A3237 SOYBEAN

To our knowledge, the soybean varieties that most closely resemble A3237 are A3127, A3322, A3501, Resnik, Pella 86, P9331, and P9341. Characteristics which differentiate A3237 include, but are not restricted to the following:

	<u>Flower Color</u>	<u>PRR^a</u>	<u>Peroxidase</u>	<u>Isocitrate b Dehydrogenase</u>	<u>Malate b Dehydrogenase</u>	<u>Aconitase</u>
A3237	Purple	Rps ₁ ^k	High	B	B	CC
A3127	Purple	Rps	High			
A3322	White	Rps ₁ ^c	Low			
A3501	Purple	Rps ₁ ^k	High			
Resnik	Purple	Rps ₁ ^k	High			
Pella 86	Purple	Rps ₁ ^k	Low	C	A	C
P9331	Purple	Rps ₁ ^c	High			
P9341	White	Rps				

- a.) Gene for resistance to Phytophthora Megasperma f.sp. Glycinea.
- b.) Isozyme analysis tests conducted by Alex Kahler, Biogenetics Services Inc., Brookings, South Dakota.

APPENDIX A

W300 YIELD TRIALS
1990-1991

Variety	Yield (Bu/A)	Maturity (Date)	Height (Inches)	Lodging (1=Best; 5=Worst)
A3237	65.84	9-23.90	34.55	1.60
Resnik	62.96	9-21.95	34.50	1.80
A3501	63.29	9-24.70	35.95	2.00
LSD (.05)	2.33	0.71	1.14	0.24
No. Loc.	13	10	13	10

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 LIVESTOCK, MEAT, GRAIN & SEED DIVISION
 PLANT VARIETY PROTECTION OFFICE
 BELTSVILLE, MARYLAND 20705

EXHIBIT C
 (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
 SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Asgrow Seed Company	TEMPORARY DESIGNATION XP3237	VARIETY NAME A3237
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 9635-190-23 Gull Road. Bld. 190 Kalamazoo, MI. 49001		FOR OFFICIAL USE ONLY PVPO NUMBER 9200213

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
 3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
 4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

1 = Yellow

2 = Green

3 = Brown

4 = Black

5 = Other (Specify) _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton')

2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

1 = Buff

2 = Yellow

3 = Brown

4 = Gray

5 = Imperfect Black

6 = Black

7 = Other (Specify) _____

★ 6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow

2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low

2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1^a)2 = Type B (SP1^b)

★ 9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis')

2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')

3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')

4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 265A')

★ 10. LEAFLET SHAPE:

1 = Lanceolate

2 = Oval

3 = Ovate

4 = Other (Specify) _____

11. LEAFLET SIZE:

9200213

☐ 21 = Small ('Amsoy 71'; 'A5312')
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

12. LEAF COLOR:

☐ 31 = Light Green ('Weber'; 'York')
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

★ 13. FLOWER COLOR:

☐ 2

1 = White

2 = Purple

3 = White with purple throat

★ 14. POD COLOR:

☐ 1

1 = Tan

2 = Brown

3 = Black

★ 15. PLANT PUBESCENCE COLOR:

☐ 2

1 = Gray

2 = Brown (Tawny)

16. PLANT TYPES:

☐ 21 = Slender ('Essex'; 'Amsoy 71')
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

★ 17. PLANT HABIT:

☐ 3

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ 18. MATURITY GROUP:

☐ 0 ☐ 6

1 = 000

2 = 00

3 = 0

4 = I

5 = II

6 = III

7 = IV

8 = V

9 = VI

10 = VII

11 = VIII

12 = IX

13 = X

★ 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

★ ☐ 0Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)★ ☐ 0Bacterial Blight (*Pseudomonas glycinea*)★ ☐ 0Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

★ ☐ 0Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)★ ☐ 0

Race 1

☐ 0

Race 2

☐ 0

Race 3

☐ 0

Race 4

☐ 0

Race 5

☐ 0

Other (Specify)

☐ 0Target Spot (*Corynespora cassiicola*)☐ 0Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐ 0Powdery Mildew (*Microsphaera diffusa*)★ ☐ 0Brown Stem Rot (*Cephalosporium gregatum*)☐ 0Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

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FUNGAL DISEASES: (Continued)

- ★ ☐ 0 Pod and Stem Blight (*Diaporthe phaseolorum* var; *sojae*)
- ☐ 0 Purple Seed Stain (*Cercospora kikuchii*)
- ☐ 0 Rhizoctonia Root Rot (*Rhizoctonia solani*)
- Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
- ★ ☐ 2 Race 1 ☐ 2 Race 2 ☐ 2 Race 3 ☐ 2 Race 4 ☐ 2 Race 5 ☐ 0 Race 6 ☐ 2 Race 7
- ☐ 2 Race 8 ☐ 2 Race 9 ☐ 2 Other (Specify) Race 10, 11, 13, 17, 21

VIRAL DISEASES:

- ☐ 0 Bud Blight (Tobacco Ringspot Virus)
- ☐ 0 Yellow Mosaic (Bean Yellow Mosaic Virus)
- ★ ☐ 0 Cowpea Mosaic (Cowpea Chlorotic Virus)
- ☐ 0 Pod Mottle (Bean Pod Mottle Virus)
- ★ ☐ 0 Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)
- ★ ☐ 0 Race 1 ☐ 0 Race 2 ☐ 1 Race 3 ☐ 1 Race 4 ☐ 0 Other (Specify) _____
- ☐ 0 Lance Nematode (*Hoplolaimus Colombus*)
- ★ ☐ 0 Southern Root Knot Nematode (*Meloidogyne incognita*)
- ★ ☐ 0 Northern Root Knot Nematode (*Meloidogyne Hapla*)
- ☐ 0 Peanut Root Knot Nematode (*Meloidogyne arenaria*)
- ☐ 0 Reniform Nematode (*Rotylenchulus reniformis*)
- ☐ 0 OTHER DISEASE NOT ON FORM (Specify): _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ★ ☐ 1 Iron Chlorosis on Calcareous Soil
- ☐ 0 Other (Specify) _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ☐ 0 Mexican Bean Beetle (*Epilachna varivestis*)
- ☐ 0 Potato Leaf Hopper (*Empoasca fabae*)
- ☐ 0 Other (Specify) _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	A3127	Seed Coat Luster	A3322
Leaf Shape	A3127	Seed Size	A3205
Leaf Color	Pion. P9341	Seed Shape	A3127
Leaf Size	A3127	Seedling Pigmentation	A3127

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

9200213

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
A3237 Submitted	125	1.4	87	8.1	10.6	41	21	15.6	
A3127 Name of Similar Variety	124	1.5	86	7.4	9.4	41	23	14.9	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBT1-A₂ in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

Asgrow Seed Company
PVP application - Soybean, A3237
May 12, 1992

EXHIBIT D

Additional Description of the Variety

A3237 is an early group III cultivar that possesses outstanding and consistent yields relative to other cultivars of similar maturity. A3237 combines the Rps_1^K gene for Phytophthora resistance with excellent standability and emergence.

Asgrow Seed Company
PVP application - Soybean, A3237
May 12, 1992

EXHIBIT E

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

A3237 was originated and developed by Craig K. Moots, Ph.D., an Asgrow Plant Breeder. By agreement between employee and Asgrow Seed Company, all rights to any invention, discovery, or development made by an employee are assigned to the Company. No rights to such invention, discovery, or development are retained by the employee.